ABSTRACT OF SANITARY REPORTS.

Vol. V.

WASHINGTON, D. C., MAY 16, 1890.

No. 20.

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UNITED STATES.

SPECIAL REPORTS.

Boston, Mass.—The case of leprosy previously reported at the Boston quarantine station has been returned to Europe by the Cunard line.

PENNSYLVANIA—Philadelphia.—Health officer's quarantine proclamation.—

PHILADELPHIA, May 10, 1890.—By resolution of the board of health of the city of Philadelphia, and by authority of law, masters and pilots will take notice: That all incoming vessels bound for the port of Philadelphia from ports infected, or which may hereafter become infected, and all vessels which have or have had sickness on board since leaving the port of departure, shall be required to report at the United States quarantine station at the Delaware Breakwater on and after May 15, until further notice, and also at the Philadelphia quarantine station on and after June 1; and that all pilots in charge of such vessels be and are hereby required to obey this order, under penalty of law, before bringing such vessels into the Philadelphia quarantine station on the Delaware River.

Vessels from non-infected ports and having no sickness on board will hoist their private signal under the national flag before passing the United States quarantine station.

JOSEPH G. PATTERSON, Health Officer.

Reports of States, and yearly and monthly reports of cities.

California—Oakland.—Month of April, 1890. Population, 60,000. Total deaths, 59, including diphtheria, 1; enteric fever, 1; whooping-cough, 1; and phthisis pulmonalis, 8.

San Diego.—Month of March, 1890. Population, 32,000. Total deaths, 16, including phthisis pulmonalis 2 and enteric fever 1.

COLOBADO—Denver.—Month of April, 1890. Population, 150,000. Total deaths, 195, including phthisis pulmonalis, 28; eroup, 6; diphtheria, 18; enteric fever, 2; measles, 9; whooping-cough, 2; and scarlet fever, 3.

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ILLINOIS—Chicago.—Month of April, 1890. Population, 1,100,000. Total deaths, 1,602, including phthisis pulmonalis, 166; croup, 36; diphtheria, 84; scarlet fever, 12; enteric fever, 45; measles, 1; and whooping-cough, 8.

Galesburg.—Month of April, 1890. Population, 17,000. Total deaths, 8, including phthisis pulmonalis 1 and scarlet fever 1.

Indiana—Evansville.—Month of April, 1890. Population, 50,000. Total deaths, 64, including phthisis pulmonalis, 14; diphtheria, 2; enteric fever, 1; and influenza, 1.

IOWA—Dubuque.—Month of April, 1890. Population, 40,000. To tal deaths, 36, including phthisis pulmonalis 5 and croup 1.

Keokuk.—Month of April, 1890. Population, 16,000. Total deaths, 13, including phthisis pulmonalis 7 and diphtheria 1.

MICHIGAN.—Week ended May 3, 1890. Reports to the State board of health, Lansing, from 51 observers, indicate that typho-malarial fever, puerperal fever, intermittent fever, inflammation of kidney, whooping cough, and remittent fever increased, and that inflammation of brain, typhoid fever, inflammation of bowels, cholera morbus, scarlet fever, dysentery, and pleuritis decreased in area of prevalence.

Diphtheria was reported at 22 places. Scarlet fever decreased by 35 per cent., and was reported at 17 places. Enteric fever increased by 125 per cent., and was reported at 9 places, and measles at 33 places.

Month of April, 1890. Compared with the preceding month, the 247 reports received indicate that puerperal fever, typho-malarial fever, inflammation of brain, membranous croup, diphtheria, cholera morbus, and scarlet fever increased, and that pleuritis, typhoid fever. and influenza decreased in prevalence.

Compared with the average for the month of April in the four years 1886–1889, cerebro-spinal meningitis, membranous croup, measles, and inflammation of kidney were more prevalent, and typho-malarial fever, typhoid fever, cholera morbus, cholera infantum, and intermittent fever were less prevalent in April, 1890.

Including reports by regular observers and others, diphtheria was reported present in Michigan in the month of April, 1890, at 53 places, scarlet fever at 54 places, typhoid fever at 17 places, and measles at 96 places.

Reports from all sources show diphtheria reported at 8 places less, scarlet fever at 16 places less, typhoid fever at 8 places less, and measles at 15 places less in the month of April, 1890, than in the preceding month.

Grand Rapids.—Month of April, 1890. Population, 70,000. Total deaths, 70, including phthisis pulmonalis, 10; croup, 1; diphtheria, 6; enteric fever, 3; influenza, 1; and measles, 1.

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MISSOURI—St. Louis.—Month of April, 1890. Population, 450,000. Total deaths, 577, including phthisis pulmonalis, 73; scarlet fever, 9; diphtheria, 6; croup, 2; whooping-cough, 3; and enteric fever, 4.

NEW YORK—Rochester.—Month of April, 1890. Population, 130,000. Total deaths, 208, including phthisis pulmonalis, 27, diphtheria, 2; scarlet fever, 1; enteric fever, 2; and whooping-cough, 1.

OHIO—Cincinnati.—Month of April, 1890. Population, 325,000. Total deaths, 505, including phthisis pulmonalis, 72; croup, 8; diphtheria, 28; measles, 9; scarlet fever, 3; enteric fever, 9; and whooping-cough, 4.

Dayton.—Month of April, 1890. Population, 60,000. Total deaths, 85, including phthisis pulmonalis, 11; croup, 2; and enteric fever, 1.

RHODE ISLAND—Newport.—Month of April, 1890. Population, 22,000. Total deaths, 26, including phthisis pulmonalis 4 and diphtheria 2.

TENNESSEE—Chattanooga.—Month of April, 1890. Population, 40,000. Total deaths, 42, including phthisis pulmonalis, 4; croup, 2; and enteric fever, 1.

Nashville.—Month of April, 1890. Population, 68,531. Total deaths, 94, including phthisis pulmonalis 21 and enteric fever 3.

Texas—San Antonio.—Month of April, 1890. Population, 50,000. Total deaths, 65, including phthisis pulmonalis, 11; eroup, 1; and diphtheria, 1.

VIRGINIA—Lynchburg.—Month of April, 1890. Population, 25,000. Total deaths, 43, including enteric fever 1 and whooping-cough 1.

Publications received.

Thirteenth annual report of the board of health of the State of New Jersey, and report of the bureau of vital statistics, 1889.

Biennial report of the board of health to the general assembly of the State of Louisiana, for the years 1888 and 1889.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

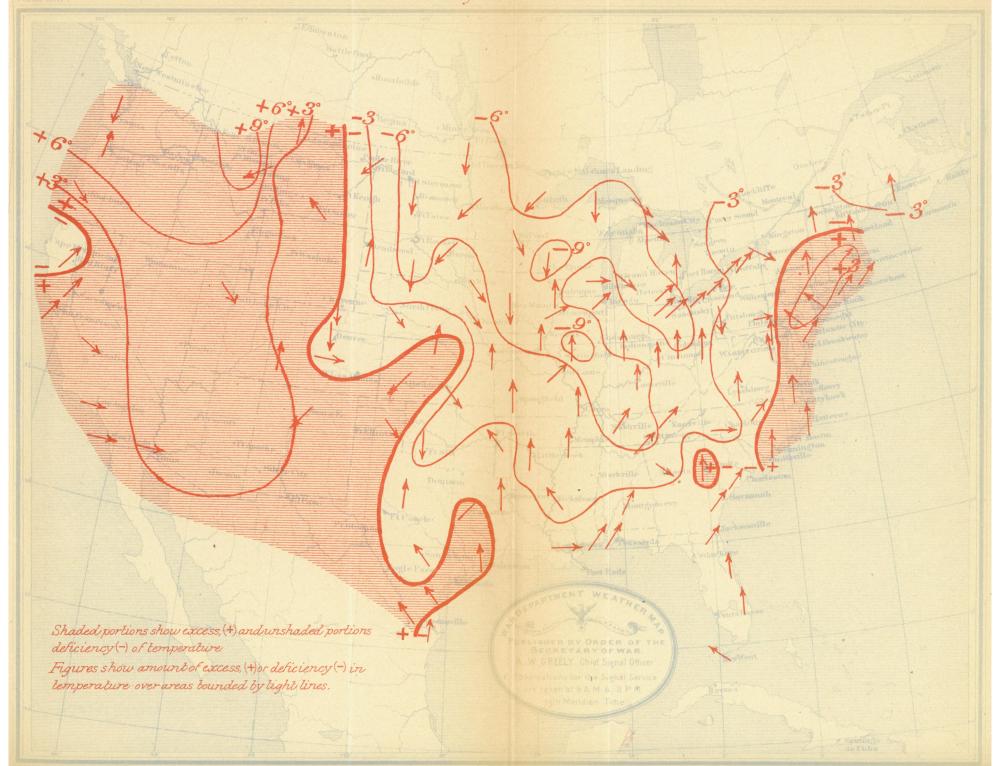
Cities.		tion. 1 deaths from all causes. ow fever. oloid. cells. cells. mis fever. ric fever. let fever.												
	Week ended.	Week ended. Estimated population.		Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping- cough.
New York, N. Y. Chicago, Ill. Chicago, Ill. Philadelphia, Pa. Brooklyn, N. Y. Baltimore, Md. St. Louis, Mo. Boston, Mass. San Francisco, Cal. Cincinnati, Ohio. New Orleans, La. Detroit, Mich. Washington, D. C. Pittsburgh, Pa. Milwaukee, Wis. Louisville, Ky. Minneapolis, Minn Newark, N. J. Rochester, N. Y. Indianapolis, Ind. Richmond, Va. Toledo, Ohio. Fall River, Mass. Nashville, Tenn. Charleston, S. C. Manchester, N. H. Portland, Me. Council Bluffs, Iowa. Galveston, Tex. Binghamton, N. Y. Binghamton, N. Y. Binghamton, N. Y. Auburn, N. Y. Auburn, N. Y. Newton, Mass.	May 10 May 3 May 10 May 3 May 10 May 10 May 10 May 10 May 10 May 2 May 2 May 2 May 3 May 10 May 3 May 10 May 3 Apr. 25 May 3 Apr. 25 May 9 May 10 May 10 May 10 May 3 Apr. 25 May 9 May 10	26,000	7399 367 7399 367 7399 367 7392 320 349 7303 3208 8118 203 1366 97 1122 203 144 141 228 19 19 9 8 8 8 7 7 10 177 6							1		3	26	8 2 2 3 3 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
Pensacola, Fla	May 3	15,000	6											

Temperature and precipitation, week ending May 10, 1890.

[Received from the Signal Office, War Department.]

TEMPERATURE.

The week ending May 10 has been cooler than usual in all districts east of the Rocky Mountains, except in southern New England and thence southward along the coast to Wilmington, N. C., over which section the temperature has been slightly in excess. The week has also been warm from the Rocky Mountains westward to the Pacific coast. Over the central valleys, the Lake region, and the Northwest, the daily temperature for the week ranged from 3° to 6° below the normal. The thermal conditions for the season, from January 1 to May 10, remain substantially as reported during the preceding week, and although the season has been unusually warm from the Gulf coast to the Lake region, the crop conditions over this region are generally reported ten to fifteen days late. In the Northwest, including Minnesota, the Dakotas, and Nebraska, the seasonal temperature differs but slightly from the normal.





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PRECIPITATION.

The region of excessive rain-fall for the present week includes almost the entire country east of the Mississippi, and portions of Arkansas, eastern Texas, Louisiana, and South Dakota. Although less than the usual amount of rain occurred in the Missouri Valley, and the central portions of Ohio, Indiana, and Illinois, general showers are reported from these sections, where the rain-fall for the week generally exceeded five tenths of an inch. In the southern portion of the east Gulf States, and in southern Georgia and northern Florida, where rain was greatly needed, the precipitation for the week ranged from two to four inches. Heavy rains also occurred in central North Carolina, along the New England coast, and in southern Wisconsin. Excessive rains are also reported in northern California and Western Oregon. Dry weather continues in the northern portions of Minnesota and North Dakota, over which region only light showers occurred during the week. seasonal rain-fall continues in excess generally over the central valleys, the Lake region, the northern portion of the middle Atlantic States, and in New England, and also on the Pacific coast north of the thirtyfifth parallel. The recent rains over the south Atlantic and east Gulf States have greatly reduced the seasonal deficiency in rain-fall in that section, and at present the rain-fall over a greater portion of this section amounts to about 50 per cent. of the normal. Over a large portion of North Dakota and western Minnesota the rain-fall for the season has been less than one-half the usual amount. In central Iowa, northwestern Missouri, and northeastern Nebraska about 75 per cent. of the normal rain-fall has occurred.

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—England and Wales.—The deaths registered in 28 great towns of England and Wales during the week ended April 26 corresponded to an annual rate of 20.7 a thousand of the aggregate population, which is estimated at 9,715,559. The lowest rate was recorded in Brighton, viz, 16.0, and the highest in Newcastle-upon-Tyne, viz, 30.7 a thousand. Diphtheria caused 2 deaths in Birmingham, 2 in Manchester, and 6 in Salford.

London.—One thousand five hundred and sixty-seven deaths were registered during the week, including measles, 61; scarlet fever, 17; diphtheria, 20; whooping-cough, 88; enteric fever, 6; and diarrhœa and dysentery, 13. The deaths from all causes corresponded to an annual rate of 18.5 a thousand. Diseases of the respiratory organs caused 345 deaths. In greater London 1,961 deaths were registered, corresponding to an annual rate of 17.8 a thousand of the population. In the "outer ring" the deaths included measles, 13; diphtheria, 13; and whooping-cough, 26.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended April 26, in the 16 principal town districts of Ireland, was 25.7 a thousand of the population. The lowest rate was recorded in Armagh, viz, 15.5, and the highest in Waterford, viz, 37.0 a thousand. In Dublin and suburbs 149 deaths were registered, including typhus, 1; measles, 2; enteric fever, 1; whooping-cough, 3; and diphtheria, 1.

Scotland.—The deaths registered in eight principal towns during the week ended April 26 corresponded to an annual rate of 24.2 a thousand of the population, which is estimated at 1,345,563. The lowest mortality was recorded in Perth, viz, 15.6, and the highest in Glasgow, viz, 29.5 a thousand. The aggregate number of deaths registered from all causes was 627, including measles, 31; scarlet fever, 2; diphtheria, 2; whooping-cough, 34; fever, 6; and diarrhœa, 11.

NETHERLANDS—Year 1889. The deaths registered in the twelve principal cities of the Netherlands, having an aggregate population of 1,154,803, corresponded to an annual rate of 22.9 a thousand of the population. The deaths included scarlet fever, 27; measles, 658; croup, 245; whooping-cough, 316; diphtheria, 268; and typhus and enteric fevers, 86.

Brazil—Rio de Janeiro.—Week ended April 5, 1890. Population, 450,000. Total deaths, 285, including yellow fever, 35; small-pox, 2;

enteric fever, 10; typhus fever, 9; pernicious fever, 5; and phthisis pulmonalis, 10. The United States consul says: "The summer is about over, and, unless under extraordinary circumstances, no yellow fever epidemic is now feared."

Week ended April 12. Total deaths, 303, including yellow fever, 32; small-pox, 4; enteric fever, 12; typhus fever, 11; pernicious fever, 2; and phthisis pulmonalis, 15. The sanitary condition of the city was fair.

CUBA—Havana.—Month of April, 1890. There were 535 deaths registered during the month, including yellow fever, 12; so-called pernicious fever, 12; enteric fever, 6; paludal fever, 3; diphtheria and croup, 8; measles, 2; hydrophobia, 1; and glanders, 3. Eight of the deaths from yellow fever occurred in the military hospital, and the remaining four were in unsanitary parts of the city.

Small-pox.—The United States sanitary inspector says, under date of May 3, 1890:

After the apparent disappearance for several months of small-pox from this city, in the month of March cases of the disease arrived from Spain and were put in the military hospital, from which point the disease has spread through the circumjacent ward, and it is now invading others of this place.

During the week ended May 1 there were 6 deaths from yellow fever and 1 from small-pox.

During the week ended May 8 there were 3 deaths from yellow fever and 1 from small-pox.

MEXICO—Guaymas.—Month of March, 1890. Population, 6,500. Total deaths, 20. None from contagious diseases.

Month of April, 1890. Total deaths, 20. None from contagious diseases. Sanitary condition of city good.

ITALY.—The United States minister furnishes the following through the Department of State:

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Annual summary of all the cases of infectious diseases reported by attending physicians in Italy in 1889.

Country.	Estimated population Dec. 31, 1888.	Small-pox.	Measles.	Scarlatina.	Diphtheria.	Typhoid fever.	Spotted typhus fever.	Puerperal fever.
Piedmont Liguria Lombardia Venetia Emilia. Tuscany The Marches. Perugia-Umbria. Rome-Lazlo. The Abruzzi. Campagnia. Apulia. Potenza-Basilicata. Calabria Sicily. Sardinia	3,963,499 3,055,425 2,326,182 2,360,609 1,008,724 616,287 969,965 1,417,732 3,084,508 1,711,105 550,458 1,342,453	734 605 4,978 3,773 3,711 3,454 645 619 763 874 1,461 3,246 403 1,663 10,507 2,294	20, 638 5, 538 19, 188 7, 887 15, 263 16, 389 6, 082 5, 024 4, 654 4, 014 3, 541 2, 460 1, 326 7, 861 8, 936 4, 899	1, 587 558 6, 895 3, 109 2, 747 4, 434 1, 514 989 895 943 1, 259 1, 116 323 925 2, 856 726	1, 835 435 2, 594 2, 106 2, 137 3, 369 627 799 1, 071 1, 204 2, 042 3, 322 1, 020 1, 220 4, 720 342	2, 634 776 8, 199 4, 571 6, 760 7, 078 2, 724 2, 614 1, 339 3, 090 4, 361 4, 969 753 1, 668 3, 865 101	67 16 184 96 420 357 133 105 67 75 294 126 40 33 215	482 155 1, 262 461 891 935 268 270 171 309 651 416 92 275 906 44
Total	30, 565, 188	39,730	133, 700	30, 916	28, 839	55, 502	2, 246	7,588

On the bacteria of healthy respiratory organs.

[Translated for this Bureau from La Pratique Médicale, Paris, April 22, 1890.]

Besser conducted his experiments on the nasal secretion of 57 persons between the ages of 20 and 60. Among these persons were 28 convalescents; the others were healthy. Some were employes in the laboratory of the Pathologic Institute of Vienna.

In 81 examinations he found the diplococcus pneumoniæ of Frankel-Weichselbaum and the staphylococcus pyogenes aureus each 14 times, the streptococcus pyogenes 7 times, and the bacillus pneumoniae of Friedlander twice. These micro-organisms were numerous and for the most part pure. The pathogenic micro-organisms were not more nu-

merous in the convalescents than in the healthy individuals.

The non-pathogenic micro-organisms which he encountered in the nasal fossæ of 30 individuals were the micrococcus liquefaciens albus 22 times, the micrococcus albus 9 times, the micrococcus cumulatus tenuis 14 times, the micrococcus flavus liquefaciens 3 times, a staphylococcus resembling the staphylococcus albus twice, the micrococcus tetragenus subflavus twice, the diplococcus minimus, the micrococcus rosaceous, and the micrococcus claviformis each once, the bacillus striatus flavus 10 times, the bacillus albus liquefaciens once, and once a bacillus resembling the bacillus aërogenes of Müller.

In 4 cases he examined the small fossæ near those of the nose. In the frontal fossa he found the bacillus pneumoniæ and the streptococcus pyogenes. In Highmore's fossa he found once, in a case of pneumonia accompanied by meningitis, the diplococcus pneumoniæ.

In 5 cases he examined the coating of the larynx. Four times he ound pathogenic bacteria, in 3 cases of tuberculosis and one case of hemorrhagic variola; in the 3 first cases, the streptococcus pyogenes; in the last case, which was complicated by cancer, he found the staphylococcus pyogenes aureus.

Among the non-pathogenic micro-organisms he found the micrococcus albus liquefaciens 4 times, the bacillus striatus twice, the sarcinae lutae

4 times, the micrococcus cumulatus tenuis once, the micrococcus albus once, and the micrococcus candicans twice.

In ten cases he examined the bronchial coating. He found the streptococcus pyogenes twice in cases of pulmonary tuberculosis, a coccus similar to the streptococcus in two cases of scarlatina, the diplococcus pneumoniæ in a case of fracture of the vertebral column, of tuberculosis of the peritoneum, and of typhoid fever, the staphylococcus pyogenes aureus in a case of tuberculosis complicated with carcinoma of the uterus and senile gangrene. He found, also, in another case the bacillus striatus, the micrococcus liquefaciens, and the micrococcus cumulatus tenuis and albus.

The evolution of micro-organisms in inoculated animals.

[Translated for this Bureau from La Rivista Internazionale d'Igiene, Naples, Italy, April, 1890.]

Charrin has communicated to the Biological Society of Paris the results of some experiments on the evolution of the micro-organism of pus in the organisms of inoculated and non-inoculated animals.

He injected under the skin variable doses of from 1½ to 2½ C. C. of a virus capable of killing a normal rabbit within from two to five days, and he operated on two series of animals, the one absolutely healthy, the other rendered more or less refractory by sub-cutaneous inoculation of from \(\frac{1}{2}\) C. C. of a culture of medium activity, repeated from six to eight times every three days. Four hours after inoculation the microorganisms were less numerous at the point of inoculation in the previously inoculated animals, and twenty-three hours later they had disappeared. This diminution and final disappearance were due to a real destruction. Hence, one of the gravest factors in any infectious disease—the quantity of virus—is less in the inoculated than in the non-At the moment of inoculation the number of inoculated animals. micro-organisms is the same in the previously inoculated and the noninoculated subjects. In the first the number tends to zero, while in the second it increases until death ensues.

With regard to the determining cause of the destruction of the microorganisms in the general circulation, the viscera, and the cell tissues of the refractory animals, Charrin notes a fact, already observed by Bouchard, that, as the free bacilli disappear, a considerable number of leucocytes form at the point of inoculation. At the end of six hours the bacilli are perfectly recognizable in some of these leucocytes (Metchnikoff theory), and a day later only a very granulous protoplasm is observed.

Experiments in the evolution of micro-organisms of other diseases in refractory animals give different results. Supposing the virus fixed, immunity the same, and only the quantitative factor variable, different results will be reached. If too little virus is injected none will pass into the general circulation. Too much will, to some extent, weaken the resistance of the inoculated. A virus too weak or too strong will conduce to analogous results.

It is a demonstrated fact that inoculation attenuates the quantitative factor in the action of the virus and modifies its character.

Experimental tetanus.

[Translated for this Bureau from La Semaine Médicale, Paris, 1890.]

Brieger states his discovery, in collaboration with Fränkel, of the tetanic virus. It is an albumin like the toxic albumins of diphtheria, cholera, typhoid fever, and the carbuncle. This substance is not an acute poison, but it possesses the property of provoking the phenomena of tetanus after the lapse of some time. This virus should be classified in the same group with that of diphtheria. It is sufficiently soluble in water, while the other toxic albumins are very slightly soluble.

M. Weyl reports the case of a dog which was inoculated, under the skin of the back, with a small quantity of the pure bacillus of tetanus. On the fourth day scoliosis of the right side appeared, then the posterior and anterior extremities were moved by tetanic shocks. The inoculation was practiced with Dr. Kitasato's acid. Dr. Kitasato was the first to cultivate the bacillus of tetanus. It has been supposed that dogs were refractory to tetanus, but this experiment proves the contrary.

MORTALITY TABLE—FOREIGN CITIES.

		popula-	Total deaths from all causes.	Deaths from—								
Cities.	Week ended.	Estimated por tion.		Cholera.	Yellow fever.	Small-pox.	Typhusfever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-
London Glasgow Warsaw Calcutta Calcutta Calcutta Amsterdam Munich Edinburgh Edinburgh Edinburgh Palermo Bristol Bristol Rotterdam Genoa Trieste Stuttgart Havre Catania Leghorn Leith Leith Leith Leith Mayence Schiedam Schiedam Cardenas	Apr. 19 Apr. 26 Apr. 12 Mar. 8 Mar. 15 Mar. 22 Apr. 19 Apr. 19 Apr. 19 Apr. 19 Apr. 19 Apr. 19 Apr. 26 Apr. 19 Apr. 26 Apr. 19 Apr. 26 Apr. 19 Apr. 27 Apr. 28 Apr. 29 Apr. 29 Apr. 20 Apr. 20 Apr. 20 Apr. 20 Apr. 20 Apr. 29 Apr. 29 Apr. 29 Apr. 19 Apr. 19 Apr. 19 Apr. 19 Apr. 29 Apr. 19 Apr. 19 Apr. 19 Apr. 19 Apr. 19 Apr. 30	5, 758, 500 545, 678 455, 823 433, 219 433, 219 406, 402 298, 000 271, 135 271, 135	2, 066 301 229 276 262 290 171 181 107 79 76 89 91 98 88 88 47 7 99 65 55 54 30 18 40 13 11 13	20 22 30		16 56 77 57 3 2	1	1 1 1 1 1	13 4	25 1 5 8 5 2 3 1 1 1 1 1 1	74 14 3 10 14 29	10
Gibraltar Kingston, Can Sagu a la Grande	Apr. 20 May 2	23, 681 18, 284 15, 605 12, 793 1, 004	14 5 10 5 1					1				

JOHN B. HAMILTON, Supervising Surgeon-General, Marine-Hospital Service.